2. (Amended) The method of claim 1, wherein the step of varying the inductance of said phase coil includes the step of changing the number of turns of said phase coil from a first number of turns to a second number of turns.

4. (Amended) The method of claim 1, wherein the step of varying the inductance of said phase coil is carried out when said sensed speed reaches a reference speed.

5. (Amended) The method of claim 1, wherein the step of varying the inductance of said phase coil is carried out when said sensed speed is about the speed at which saturation of a core of a phase coil of said variable reluctance motor occurs.

6. (Amended) The method of claim 1, wherein the step of varying the inductance of said phase coil occurs at approximately the motor speed at which the motor force corresponding to a first number of turns (T1) of said phase coil is about the same as the motor force corresponding to a second number of turns (T2) of said phase coil.

11. (Amended) In a motor system including a variable reluctance motor having at least one phase coil, said system comprising:

a sensor coupled to said variable reluctance motor, said sensor providing a feedback signal representative of a speed of said variable reluctance motor between at least a low range and a high range;

a comparing circuit for comparison of said feedback signal to a reference signal and for providing a switching signal based on results of said comparison; and

a switch coupled to said comparing circuit and responsive to said switching signal such that the number of turns of said phase coil is changed from a higher number of turns for said low range to a lower number of turns for said high range, whereby the force delivered by said variable reluctance motor is maintained.